CONCEPT

Creative Problem Solving Techniques: Tools for Root Causes and New Ideas



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Technical depth: Practitioner · **Practical mode:** Case study

Introduction

Teams often solve the wrong problem, settle on the first idea offered or repeat fixes that have failed before. Recurring faults, customer complaints and process bottlenecks persist because problems are rarely defined, analysed and explored systematically. This Core Concept course gives professionals a structured toolkit for creative problem solving, combining the Osborn-Parnes process, root cause analysis and idea generation techniques with methods for evaluating and implementing solutions. Participants work through cross-sector cases and leave with a Creative Problem-Solving Case File built around a live problem from their own workplace.

Course Objectives

- Frame workplace problems precisely using problem statements, How Might We questions and Is/Is Not analysis
- Apply the Osborn-Parnes Creative Problem Solving process and the Double Diamond to move from a problem to a tested solution
- Analyse root causes with Ishikawa diagrams, the 5 Whys and Kepner-Tregoe Problem Analysis
- Generate options with divergent techniques including brainwriting, SCAMPER, Six Thinking Hats and TRIZ principles
- Evaluate and select solutions with weighted criteria, then plan a pilot and follow-up through the PDCA cycle
- Produce a Creative Problem-Solving Case File for a live workplace problem

Target Audience

- Team members who handle recurring operational problems and service issues
- Team leaders and supervisors responsible for daily performance and process fixes
- Quality and continuous improvement staff who run improvement activities
- Project and administrative officers who resolve issues that cross team boundaries
- Technical, service and support specialists who propose improvements to their processes

Course Outline

Day 1: Problem-Solving Foundations and Problem Framing

- Divergent and Convergent Thinking Principles
- FourSight Thinking Profile and Team Preferences
- How Might We Question Drafting for Problem Statements
- Is/Is Not Analysis for Problem Definition
- Current-State Process Scoping with SIPOC Diagrams

Day 2: Creative Problem-Solving Models

- Osborn-Parnes Creative Problem Solving Process
- Design Council Double Diamond: Discover, Define, Develop, Deliver
- Six Thinking Hats for Structured Team Discussion
- De Bono Lateral Thinking and Provocation Techniques
- TRIZ Contradiction Matrix and 40 Inventive Principles

Day 3: Root Causes and Idea Generation

- Ishikawa Fishbone Diagram for Cause Analysis
- 5 Whys Analysis with Evidence Checks
- Kepner-Tregoe Problem Analysis
- Brainwriting 6-3-5 and Reverse Brainstorming
- SCAMPER Idea Generation Checklist

Day 4: Evaluating Ideas and Avoiding Common Traps

- Pugh Matrix and Weighted Criteria Scoring
- Affinity Diagrams and Dot Voting for Idea Clustering
- Cognitive Bias Checks: Anchoring, Confirmation and Groupthink
- Pre-Mortem Analysis for Solution Risks
- Idea Management Process Aligned to ISO 56007

Day 5: Case Work and the Creative Problem-Solving Case File

- Logistics Case Study: Recurring Delivery Delays
- Public Service Case Study: Repeat Customer Complaints
- Solution Pilot Plan Using the PDCA Cycle
- Creative Problem-Solving Case File Drafting
- Peer Review Panel and Solution Pitch

Skills You Will Gain

- Problem Framing
- Root Cause Analysis
- Divergent Thinking
- Idea Evaluation
- Structured Team Facilitation
- Solution Piloting
- Bias-Aware Decision Making

Why Attend This Course

- Return with a Creative Problem-Solving Case File for a real workplace problem, already reviewed by peers
- Stop recurring problems by treating their causes rather than their symptoms
- Run short, structured idea sessions that produce more than the usual suggestions
- Learn how professionals from other sectors and countries tackle similar operational problems

Conclusion

Creative problem solving is a discipline, not a talent reserved for a few. The course moves from framing a problem precisely, through the main creative problem-solving models, to root cause analysis, idea generation, evaluation and the biases that distort judgement. The final day applies the full process to a problem from each participant's workplace, producing a Creative Problem-Solving Case File that can be taken back to a manager, together with a repeatable method for the next problem the team faces.